APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/695,053	10/28/2003	Mikihiko Terashima	17158	5965

23389   7590   10/18/2006

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EXAMINER
BITAR, NANCY

ART UNIT	PAPER NUMBER
2624	

DATE MAILED: 10/18/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

	Application No.	Applicant(s)
Office Action Summary	10/695,053	TERASHIMA ET AL.
	Examiner	Art Unit	
	Nancy Bitar	2624	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on _28 October 2003_.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) _1-19_ is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) _1-19_ is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on _28 October 2003_ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☒ All b)☐ Some * c)☐ None of:

      1.☒ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☒ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date _10/28/2003_.

4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____ .

5)☐ Notice of Informal Patent Application

6)☐ Other: _____.

DETAILED ACTION

Claim Objections

Specification

1.   Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

The abstract of the disclosure is objected to because the abstract contains

nearly exact repetition of the language used in claim 1. Correction is required. See

MPEP § 608.01(b).

Claim Rejections - 35 USC § 112

2.   The following is a quotation of the second paragraph of 35 U.S.C. § 112:

The specification shall conclude with one or more claims particularly pointing out

and distinctly claiming the subject matter, which the applicant regards as his invention.

3.   Claims 6 is rejected under 35 U.S.C. § 112, second paragraph, as being

indefinite for failing to particularly point out and distinctly claim the subject matter which

applicant regards as the invention.

The recitation "interpretation easiness of the character" is unclear. it is unclear what feature or element is being further defined by this claim language, so that the claim fails to clearly point out and distinctly claim applicant's invention.

Claim Rejections - 35 USC § 103

4.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5.   Claim 1-19 rejected under 35 U.S.C. 103(a) as being unpatentable over Kawakami et al(US 2001/0020946 A1) in view of Niblack et al(6,182,069).

As to claim 1, Kawakami discloses an automatic index making system for an electronic catalog, comprising: an object input section (18,figure 1) configured to enter an image object which enables generation of at least two or more different images by setting a virtual viewpoint to read an image (the two-dimensional image section 18 is capable of picking up images of faces of persons and receiving as inputs two-dimensional images, paragraph [0041], note that the image scanner reads the photograph);Kawakami clearly teaches a two-dimensional image generation section configured to electronically analyze the image object entered by the object input section(image recognizing section, 50), based on the specified information from the

generated image specification section to generate a two-dimensional image(a two-dimensional image output from the two-dimensional image input section 18, paragraph[0041]). Moreover, Kawakami teaches an index data creation section "(storing section, 51, paragraph[0046])) configured to create index data by use of the two-dimensional image generated by the two-dimensional image generation section (two-dimensional image section,18); and an index output section (projection section, 307, figure 4) configured to output an index by use of the index data created by the index data creation section .While Kawakami meets a number of the limitations of the claimed invention, as pointed out more fully above, Kawakami clearly teaches the integrated storing section that stores image information but fails to specifically teach the a generated image specification section configured to output specified information to create index data. Specifically, Niblack et al. teaches the in figure 2 the structure of the two- dimension image data representation which enables the structure to be searched in conventional query fashion based on image characteristics. Niblack clearly teaches the the decomposed elements of the image 40 are digitized and tabularized in order to construct the data representation 42 (i.e. index data, column 4, lines 32-43). Niblack teaches the area and characteristic information are stored in the storage reserved for image data representations (column 11, lines 38-40). Niblack teaches video information is stored in the database by means of representative frames that include at least one object and a background. A query of the database is executed by determining whether a representative frame in the database having at least one object and a background is similar to a search image having at least one object and a background (see abstract).

Because the use of Niblack storage to store the computer characteristics values for

objects and backgrounds are organized to represent the data representation and stored

in the database. it would have been obvious to one of ordinary skill in the art to

categorize the images in the in Kawakami storing section in order to support greater

precision in query specification not only of object, but also of background and decrease

erroneous recognition. Therefore, the claimed invention would have been obvious to

one of ordinary skill in the art at the time of the invention by applicant.

As to claim 2, Niblack et al teaches the apparatus according to claim 1, wherein

the specified information includes presence information of one of an object in the image

object and a part of the object (figure 15)

As to claim 3, Kawakami teaches the apparatus according to claim 1, wherein the

specified information includes whether or not an object in the image object is a preset

spatial posture (paragraph [0092], it is possible to estimate the position)

As to claim 4, Kawakami teaches the apparatus according to claim 3, wherein the

spatial posture includes at least one of a front, an upper surface, a side face and a

perspective surface of the object (figure 2 , X axis corresponds to the left direction of the

face, the Y axis is the up/down direction of the face and the Z axis is the front direction

of the face, paragraph [0050]).

As to claim 5, Kawakami teaches the apparatus according to claim 1, wherein the

specified information includes illumination information of the image object (two-

dimensional image has a shading resulting from a difference in light source, paragraph

[0013]).

As to claim 6, as best understood, Kawakami teaches the apparatus according to claim 1, wherein the object has character information, and the specified information includes interpretation easiness of the character (a data processing apparatus that can correctly recognize the object included in the two-dimensional image, paragraph[0015], note that the image recognition section recognize the character that is included in the image).

As to claim 7, Niblack teaches the apparatus according to claim 1, wherein the two-dimensional image generation section includes a function of synthesize a background (specification of an object with a set of image characteristics that may include motion, and associated values, and a background with a set of image characteristics that may include motion, and associated values. The query is executed at step 470 and a list of retrieved representative frames is returned in step 480, ranked by similarity to the search image. In step 490, a frame in the list returned in step 480 is selected and the represented video is displayed for the user, column 18,lines 61-67) .

As to claim 8, Kawakami teaches the apparatus according to claim 1, wherein the two-dimensional image generation section generates at least two or more different two-dimensional images for one of the image objects (paragraph [0041]), and the index data creation section extracts one of the different two-dimensional images to use it as index data (paragraph [0046], note that it becomes possible to generate an image of a face of the person included in the two-dimensional image input to the two-dimensional image input section 18, with the direction of the face made different, or the expression of the

face made different. The optimal integrated model parameter is changed based on an operator's instruction input through an operating section 41).

As to claim 9, Kawakami teaches the apparatus according to claim 1, wherein the two-dimensional image generation section generates at least two or more different two-dimensional images for one of the image objects (paragraph [0041]) and the index data creation section creates index data corresponding to the at least two or more different two-dimensional images for one of the image objects (the correspondence storing section 51 may store the optimal integrated parameter found at the parameter search section 30 and the data for identifying the person included in the two-dimensional image input from the operating section 41, in correspondence with each other, based on the two-dimensional image input by the two-dimensional image input section 18, paragraph[0047]).

As to claim 10, Kawakami teaches the apparatus according to claim 9, wherein at least one display image size is different among the two-dimensional images in the index data (the shape of the person in the two-dimensional image are different, paragraph [0010]).

As to claim 11, Kawakami teaches the apparatus according to claim 1, wherein the two-dimensional image generation section includes a function of correcting data of at least one of the image object and a copy of the image object based on a result of electronically analyzing the image object (Correction of the parameter is performed in accordance with the equations (20), paragraph [0085], note step S09 and S10 in figure 5).

As to claim 12, Kawakami teaches the apparatus according to claim 1, wherein the image object is a three-dimensional image(12), and a target of the correction includes at least one of a spatial origin coordinate of the image object, inclination of a spatial coordinate axis, a luminance value, a color, a coefficient of reflection, a light emission coefficient of the object, the number of polygons, an initial spatial position, and illumination conditions of the object (in step S09, an amount of correction of the parameter is calculated. The parameter correction amount is calculated in accordance with the equation 19 where Rc, Rt and Ru are modification matrixes corresponding to the integrated model parameter c, pose parameter t and the light source parameter u, respectively, paragraph [0084]).

As to claim 13, Kawakami teaches the apparatus according to claim 1, wherein the index output section further includes a function of electronically searching an image object similar to the image object(paragraph[0033])

As to claim 14, Kawakami teaches the apparatus according to clam 1, wherein the index output section searches the similar image object by using a characteristic amount of the two-dimensional image generated at the two-dimensional image generation section (an image recognizing section 50 for selecting a face image of the same person as the person of the face image included in the two-dimensional images, among the plurality of two-dimensional images stored in advance in the correspondence storing section, paragraph[0033]).

As to claim 15, Niblack teaches the apparatus according to claim 1, wherein the index output section includes a function of outputting the index as a paper medium

(display 13,note that applicant in the specs discloses that index is lastly outputted on a display screen or paper, paragraph [0069])

As to claim 16, Kawakami teaches the apparatus according to claim 1, wherein the two-dimensional image generation section uses a recognition algorithm to recognize specific characteristics in the image object to electronically analyze the image object entered by the object input section (image recognizing section 50, figure 1, paragraph [0045])

As to claim 17, Kawakami he apparatus according to claim 1, wherein the two-dimensional image generation section (18) uses an algorithm to read and analyze information added to the image object entered by the object input section to electronically analyze the image object (the integrated model generating section performs principal-component analysis on the textures stored in the storing section 14, paragraph[0040]).

The limitation of claim 18 has been addressed above. Claim 18 differ from claim 1 only in that claim 18 is a method claim whereas, claim 1 is an apparatus claim. Thus, claim 18 is analyzed as previously discussed with respect to claim 1 above.

The limitation of claim 19 has been addressed above. Claim 19 differ from claim 8 only in that claim 19 is a method claim whereas, claim 8 is an apparatus claim. Thus, claim 19 is analyzed as previously discussed with respect to claim 8 above.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Rising III et al. (US 6,445,834) is cited to teach a storage database images that includes different set of features modules.

Barski et al (US 4949392) is cited to teach document recognition and automatic indexing for optical character recognition

Noto et al (US 2004/0057613) Is cited to teach a three dimensional image generating apparatus that includes reflective indexes based on the division of pixel in the image.

Inquiries

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nancy Bitar whose telephone number is 571-270-1041. The examiner can normally be reached on Mon-Fri (7:30a.m. to 5:00pm).
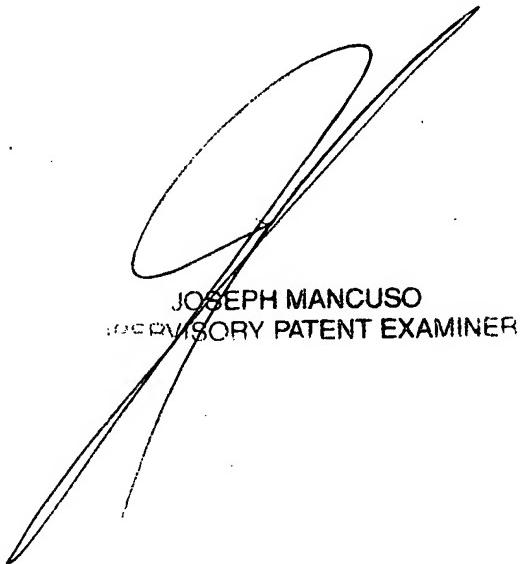
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Joseph Mancuso can be reached on 571-272-7695. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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USPTO Customer Service Representative or access to the automated information

system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Nancy Bitar   10/12/2006

JOSEPH MANCUSO
SUPERVISORY PATENT EXAMINER